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REMARKS

This RCE application contains claims 19-51 directed to a catalytic process for producing C3 olefins using a combination of at least two catalysts as set forth in claim 19. Claim 51 also includes the step of recovering propylene and polymerizing such propylene.

35 USC 112, 2nd Paragraph Rejection of Claim 51

Claim 51 was rejected for omission of an essential step per MPEP 2172.01. The rejection is not understood since claim 51 relies on claim 50 which recites with specificity the production of propylene and since claim 51 itself recites polymerization or co-polymerization.

MPEP 2172.01 states that a claim does not necessarily fail to comply with 35USC112, second paragraph where the various elements serve independent purposes. The production of propylene in claim 50 from which claim 51 depends and the polymerization of propylene in claim 51 are such elements and the polymerization feature is not deemed to be essential when the disclosure is read as a whole. Accordingly, the interrelation of the elements does not fail to point out and distinctly claim the invention when consideration is made of the sequence of claims 50, 41, 32, and independent claim 19, from which claim 51 depends.

See also MPEP 2164.08(c) re enablement. Reconsideration is requested.

35 USC 103(a) Rejection of Claims 19-51 over Ladwig et al. U.S. Patent No. 6093867 ("Ladwig") in view of Swan III et al. U.S. Published Patent Application No. 2001/0042700A1 ("Swan")

The present rejection relies on the combination of Ladwig and Swan for the rejection of all claims now in the application. Applicants respectfully traverse because the references do not teach a catalytic cracking process using two intermediate (or an

intermediate and a smaller) pore size molecular sieves and recovering an increased propylene production over either of these sieves independently.

The rejection admits that Ladwig does not use a multicomponent catalyst but presents Swan for a teaching of more than one catalyst.

However, Swan does not complete the invention or suggest it to the skilled artisan because Swan requires a large pore catalyst such as zeolite Y optionally in combination with only one other intermediate pore size molecular sieve. Swan suggests Y plus beta, Y plus ZSM-5, or Y plus SAPO. Swan, like Ladwig, did not recognize that using two intermediate pore size molecular sieves would even further improve propylene production. Thus, Swan suffers the same shortcoming as Ladwig in not recognizing, teaching, or even suggesting the combination of two intermediate pore size molecular sieves.

Failure of Swan to recognize the combination is not surprising because Swan was directed to a high boiling point feed (see Swan paragraph 13) with a recycle process that included hydrogenation of aromatics. Also, there is nothing to urge Swan or the skilled artisan to go to the expense, trouble, and additional preparation time (all amounting to additional cost) of using two intermediate pore size molecular sieves. Use of one was merely optional to Swan and Swan was directed to improved propylene yields from the process recycle and especially from fully hydroprocessing the cycle oil so as to make decahydronaphthalenes the prevalent hydrogenated aromatic and provide more propylene therefrom. Swan was focused on making the heavily hydrogenated species available, not on the combination of catalysts.

The rejection points to Swan paragraph [0055] for catalyst combination to increase propylene production but this further evidences the unobviousness of the invention when Swan states that "...further increases...can be obtained when a shape selective catalyst is combined...." (emphasis added).

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